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Arizona Labor Market NEWSLETTER

Arizona Department of Economic Security

Vol. VIII No. 3
March 1984

Unemployment Rate

Seasonally Adjusted
January*

ARIZONA	6.1%
Maricopa Co.	4.8%
Pima Co.	5.8%
UNITED STATES	8.0%

Consumer Price Index

National-December
1967 - Base Year

Wage Earner/Clerical Worker -	301.5
% Chg. Yr. Ago	3.3
All Urban -	303.5
% Chg. Yr. Ago	3.8

Phoenix-4th Qtr.
1977 - Base Year

All Urban -	174.1
% Chg. Yr. Ago	4.1

Producer Price Index

National-January*
1967 - Base Year

All Commodities-	308.1
% Chg. Yr. Ago	2.7
Finished Goods -	289.4
% Chg. Yr. Ago	1.9

* Preliminary

ARIZONA OUTLOOK

The Annual Forecast Issue

This is the fourth year we have published our annual economic forecasts. Last year at this time, everyone wondered if, in fact, the long awaited recovery would arrive. Now everyone looks back at 1983 with the recognition that the recovery did arrive and has apparently been gaining strength with each passing month. Now our attention turns in a different direction. Can the recovery be sustained? Will budget deficits stop the recovery this year? What about inflation?

While we do not profess to have all the answers, we hope that the statistics and narrative that follow will lead you to a better understanding of where Arizona fits into the national scene and which way it will be headed in 1984 and into 1985. Please spend a little time looking through the material that follows and see if you agree with our outlook. As always, we leave it to you to be the final judge of our work.

As is usually the case, the products of this effort would not have been possible without the hard work of many new and old staff in Labor Market Information--particularly, Brian Cary and David Sinclair who did much of the work in putting the forecasts together.

After experiencing high unemployment and stagnant employment growth in 1982, Arizona welcomed the economic recovery that began early last year. An improving national economy brought stable prices and falling interest rates, stimulating construction activity throughout the state. Employment in construction surged by nearly 20 percent, reversing the decline of the previous year. As the recovery gained momentum, new jobs began to appear in many other industries.

Unfortunately, much of the employment growth was confined to certain areas while Arizona's nonmetropolitan areas continued to suffer from high unemployment and limited job opportunities. Many communities traditionally have depended on the state's copper mines and smelters for jobs and

income. Weak demand, huge stockpiles and labor disputes prevented growtn in copper activity, and as the year wore on, layoffs became more frequent. Falling household incomes in copper-mining areas reduced demand for all goods and services, resulting in fewer jobs in the population-serving trade and services sectors. Many of these communities also were devastated by late-summer flooding--the only silver lining in this gloomy scenario was some temporary construction employment generated by repairs made to the state's roads and bridges.

Some parts of the state which do not depend on copper-related employment experienced other problems. Border towns such as Douglas, Nogales and Yuma were hurt by the continuing weak state of the Mexican economy and the steady decline of the peso. Retail firms in border communities rely on trade with Mexican nationals for a large portion of their business. Fewer visitors spent less money in these towns during 1983, so unemployment remained unusually high in the border counties. Any increases in employment were due mostly to increases in demand for services related to population growth and to increasing "twin plant" manufacturing activity. Employment growth lagged in some of Arizona's northern counties, mostly because summer tourism continued to be a disappointment. Despite the improving American economy, visits to many of northern Arizona's scenic and recreation areas have not achieved levels reached during the 1970s, reducing the need for tourist-related services. Construction provided some jobs, both directly and indirectly--small increases were recorded by lumber operations supplying materials to Arizona's building sites, providing some relief to the forested areas of the northern counties. Government, after two years of decline or no growth, added small numbers of workers throughout the state, due mostly to increasing school enrollments rather than a general expansion of government services.

Arizona's metropolitan counties, Pima and Maricopa, accounted for virtually all of the employment growth in the state during 1983. The unemployment rate in Pima County fell steadily throughout the year, but the gains in employment were not as dramatic as those recorded in Maricopa County. The Tucson area is not as dependent as it once was on retail trade with Mexican nationals, but the lingering effects of poor economic performance in Mexico held back the growth of retail sales somewhat. Government, especially the university, is a major source of jobs in Pima County, but staff levels were held in check by budget constraints. The copper industry is not the dominant force in Pima County that it was before the local economy diversified. Nevertheless, lack of growth in mining, smelting and min-

ing supplies had a dampening effect on the area economy. On the positive side, Pima County construction employment increased sharply; finance, insurance and real estate expanded staffs; and the county's growing high-technology sector added over 1,000 jobs, mostly in electronics, aircraft and defense-related manufacturing.

Maricopa County residents in search of employment opportunities continued to benefit from access to the most diversified job market in the state. The Phoenix area is virtually immune to the declining fortunes of the mining industry and the economic problems of Mexico have had little impact. As in the rest of the state, the interest- and cost-sensitive construction industry

led the growth in employment as building activity boomed throughout the county. Very slow growth characterized the transportation and public utilities industries while divestiture prevented gains from taking place in communications employment.

Maricopa County's touted high-technology sector picked up momentum and began adding employees again during the year. Aerospace

manufacturers benefited from strong economic performance nationally as well as from increased defense expenditures and responded by increasing their staffs. Phoenix's role as the business center of the desert increases seen in finance, insurance, real estate and business services. Hoteliers and resort owners in the area experienced some success in attracting off-season convention business, thereby helping to smooth the normal seasonal patterns in services and trade employment and creating demand for additional facilities to be built and staffed.

By the end of 1983, Arizona was well along the path of economic growth once again. This time, however, the state has achieved an unprecedented mix of industries and job opportunities. We hope that these opportunities eventually will be extended into the nonmetropolitan areas of Arizona. Meanwhile, Arizona did enjoy a solid year of economic growth in 1983 and can look forward to even more employment opportunities in 1984.

NATIONALLY
1983 - INTO 1984 AND BEYOND

Looking back over 1983, the much anticipated recovery finally arrived. After three years of only marginal growth in the national economy, things finally started to turn around. Of course, there are many reasons why the economy did not rebound as quickly as many people had expected, but most of the problems revolved around inflation and the attempts to reduce it. In 1981, consumer prices rose 10.4 percent. Reducing that to 1983's rate of 3.2 percent forced unemployment to rise significantly and general business activity to decline. Now with the recovery over a year old, it is important for us to look back over the territory we have covered and to anticipate where we will be in the future.

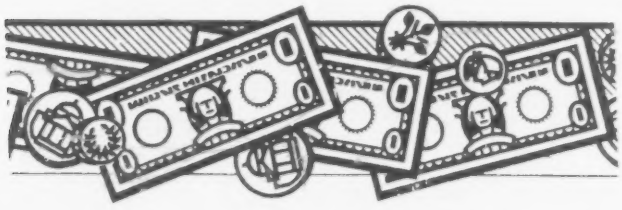
The first six months of 1983 were much in line with what everyone had expected. The economy began to recover slowly as the interest-sensitive sectors of construction and automobiles enjoyed an environment of declining interest rates. Although by historical standards interest rates were still very high, consumers apparently felt that this was the right time to make those

purchases. As nearly everyone knows by now, the automobile companies enjoyed record profit levels in 1983, after record losses a year or so earlier. And in housing the recovery was equally impressive.

But the second half of 1983 was the real surprise. Few, if any, economists expected the recovery to proceed as quickly as it did after the middle of the year. The un-

employment rate declined steadily from 10.0 percent in June to 8.2 percent in December. This produced the largest annual decline ever recorded in the unemployment rate. Consumer confidence rose steadily and with it, purchases at retail trade stores and production by many manufacturers. What had started slowly was now a quickly-recovering economy. And the recovery was very traditional by economic standards. Initially, the interest-sensitive industries responded to a decline in interest rates. This led to increased consumer confidence and further purchases in the trade and services sectors. Now as we enter 1984, we are poised to enter another phase of the recovery. Currently, many manufacturers are hesitant to add new staff because they are unsure that the recovery will continue. But in the months ahead, a lack of inventories and growing competition from other companies will force them to expand production. This will probably be the most critical time for the economy. To expand, these companies will need additional cash. Two possible

sources are internal cash flow or money borrowed from the bank. Unfortunately, internal cash flow is usually insufficient to fund significant expansion. And loans from the bank will become more expensive as the federal government continues to borrow to pay the deficit, and other companies try to borrow money too. Therefore, as the accompanying table indicates, interest rates will fall only slightly before rising later this year and the unemployment rate will not fall much further.



Of course, 1984 is an election year, and many people have drawn a correlation between economic activity and election-year politics. While there are many problems to be solved, little substantive action is expected on the deficit or spending changes until after the election. Meanwhile, the Federal Reserve is expected to keep the money supply from growing any more rapidly than in 1983. With the economy now recovering at a sustainable pace, the Federal Reserve will be very cautious about starting the inflationary spiral again. Of particular interest will be the union wage settlements that are scheduled for negotiation in 1984. In many industries (such as automobiles where the UAW will be negotiating a contract), improved economic conditions may encourage unions to seek substantial raises. How these questions are finally settled will help to determine our economic course in the future.

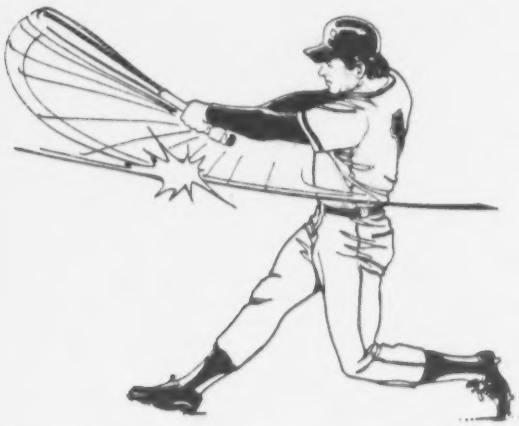
In general, 1984 will be a continuation of the traditional recovery that started in 1983. The November election will inhibit significant economic changes as interest rates remain high and unemployment rates fall marginally. Structural shifts in the economy will continue to favor high technology and services companies to the detriment of traditional heavy manufacturing businesses. But we are far from being out of the woods. As the table indicates, unemployment is expected to remain over 7 percent and economic growth in 1985 may slow appreciably.

KEY NATIONAL VARIABLES

	1984				1985		1983 ANNUAL AVERAGE	1984 ANNUAL AVERAGE	1985 ANNUAL AVERAGE
	QTR. 1	QTR. 2	QTR. 3	QTR. 4	QTR. 1	QTR. 2			
Real Gross National Product	1592.1	1607.3	1624.5	1640.7	1652.2	1661.8	1534.8	1616.2	1667.6
GNP Percent Change	5.6	3.9	4.3	4.1	2.8	2.4	3.3	5.3	3.2
Inflation	4.2	4.3	4.5	4.6	4.9	4.8	3.2	4.5	4.7
Prime Rate	11.0	10.9	10.5	10.8	11.2	11.5	10.8	10.8	11.2
Unemployment Rate	8.0	7.8	7.6	7.5	7.4	7.4	9.4	7.7	7.4

FORECASTING PERFORMANCE IN 1983

Sometimes it seems that forecasting future activity in the economy is much like trying to hit a moving target. Just when you think



that everything has been settled, one of the pieces changes and everything has to be refigured again. That is precisely what happened in 1983. Our forecasts of local economic activity depend on what the national economy does. A year ago, nearly every national economic forecast called for a slow but steady economic recovery in 1983. And at least for the first six months of the year, that was the case. But in the second half of the year, the recovery was much more rapid than expected. And since the more rapid improvement was in sectors upon which Arizona's economy is built, construction and services, our economy expanded more rapidly. Because the national forecasts underestimated the recovery and its composition, our forecasts were conservative.

Another problem that affected our forecasts was the annual benchmarking of the employment by industry statistics. Before the benchmarking process, our forecast of wage and salary employment was low by less than 0.2 percent. But following the revisions, we were low by about 2.0 percent. And the reason for that substantial change was the rapid growth that occured in construction and services, two areas that had surprised many people.

A third area that must be considered when evaluating forecast performance is the many uses that the model must perform. In addition to forecasting, the model is often used by agencies and businesses to simulate alternative scenarios about the economy. Many of our users request that we develop both more optimistic and more pessimistic national scenarios and then estimate what the impact would be on Arizona. But in developing a simulation capacity, certain features that might be desirable in a strictly forecasting model had to be dropped. Exactly what compromise is struck is always the point of contention.

All of these points aside, the model performed reasonably well in 1983. During the first half of the year, it was nearly right on the money. Except for some minor problems, everything went very well. But in the second half of the year, the services and construction areas, in particular, grew quite strongly. This, of course, worked to our disadvantage because the national forecasts did not accurately anticipate this acceleration.

By area, Phoenix and Tucson enjoyed most of the growth during 1983 and our relatively conservative forecasts show that situation. In general, the only areas about which we were too bullish were government and mining. The serious plight of the copper industry was not fully appreciated. And in government, the rate of growth has slowed dramatically. Except for employment growth in the school sector, government employment is actually falling.

In some areas, such as manufacturing and trade, the model performed very well. But as mentioned above, that performance is offset by conservative forecasts in construction and services. Hopefully, this year's forecasts will build on the strengths while minimizing the weaknesses. Only time will tell. But because forecasting is so improtant to running any successful project, we will continue to refine and improve our techniques.

Before predicting the course Arizona's economy will follow over the next two years, the national economic environment must be assessed. This provides a backdrop to compare with Arizona's performance. More importantly, the dynamic forces which shape the state's economy can be identified and included in the forecasting process. In 1983, declining interest rates, stable prices, surging housing starts, lower taxes and increased defense spending were among the factors that lifted the state out of the recession and onto the road to recovery. These aren't the only variables influencing Arizona's future. What about copper prices: up or down? Will defense spending be slashed to balance the budget, or will taxes be increased? Will interest rates rise, and if so, when and by what amount? Nobody can answer these questions with certainty, but assumptions must be made regarding the course of world and national events to allow these forces to interact in a forecasted scenario with the structure of Arizona's economy.

We expect Arizona to continue to enjoy more growth and less unemployment than the national average during the next two years, much as it has in the past. The composition of employment in the state is evolving in a way that reflects the dynamic nature of Arizona's economy. Arizona is moving away from its traditional economic base of mining, tourism and agriculture and toward a more diverse industrial mix.

The surge in construction activity that began last year will moderate in 1984. The rate of housing starts will decline, causing construction employment in Arizona to level off by the end of the two-year period. Residential development in the urban areas will provide most of the jobs and will be the most interest-sensitive component of construction. Many commercial developments are in progress or in the planning stages, and large scale projects such as road building and power plant construction in various parts of the state will keep construction employment at relatively high levels. The risk of a rapid increase in interest rates is very real, however, and may cause construction activity to level off sooner than expected.

Interest rates should remain relatively stable, rising gradually in late 1984 and 1985. This will allow durable goods manufacturers to continue to invest in the necessary facilities to expand production in Arizona, creating demand for additional workers. Most of the increase in durable manufacturing will be in the high-technology sector, most of which will be located in the Phoenix and Tucson areas. Strong growth is expected in aerospace manufacturing due to increases in defense spending on planes, missiles, helicopters and guidance systems. If defense spending is limited as a means of reducing the federal deficit, this sector will not grow as rapidly.

The full range of population-serving industries is expected to be even more robust than recent experience would indicate. The need for business and financial services will accelerate, especially in the Phoenix area, as the state's economy becomes more sophisticated. Phoenix is emerging as a regional center for commerce and will develop support services like those in Los Angeles, Denver and Houston. Employment in the state's hotels and motels will accelerate--the current winter season is the strongest in several years and the summer tourist season should respond favorably to stable gasoline prices and a strong national economy. The Summer Olympics will generate tourism, some of which will spill over to Arizona. The overall level of business and commerce will result in more travel and lodging demand, and enough off-season business should be attracted to limit the number of workers laid off during traditionally slack periods.

Employment in retail trade will continue expanding at a rapid clip through 1985. Eating and drinking establishments will benefit from generally better conditions in the state economy, more tourism and an increasing volume of convention business. Retail stores enjoyed the best Christmas season in several years and seasonal lay-

offs have been less frequent. The boom in housing construction has created a need for rapid development of neighborhood shopping centers. Large numbers of cashiers, sales clerks and managers will be hired to staff them. Combined, the services and trade industries will add nearly 60,000 jobs during the next two years.

Not all sectors of Arizona's economy will grow so quickly. The copper mining industry, beleaguered by low prices and lagging product demand, is an unlikely source of new jobs in the near future. Public sector hiring will be limited by sluggish revenues and nagging deficit problems at all levels of government. By mid-1984, however, tax collections may have responded to improving economic conditions, making a moderate growth rate in public employment possible. The prisons and schools are the most likely sources of new jobs in the near future.

Arizona is expected to grow during the next two years at a rate comparable to the years before the recent economic slump. Wage and salary employment will grow by 5.6 percent in 1984 and 4.2 percent in 1985, representing over 100,000 new jobs. Unfortunately, unemployment will remain persistently high in many of the state's nonmetropolitan areas, especially those dependent on mining and foreign trade. Maricopa County will benefit the most. Unemployment in Phoenix will remain well below the state and national averages for the foreseeable future. Pima County will grow less rapidly but still will enjoy a much healthier outlook than in the recent past. Unemployment, while somewhat higher than in Maricopa County, will be low compared to 1982-83.

As Arizona moves into the mid-1980s, it will continue to enjoy the natural economic advantages that have allowed growth to continue at a time when job seekers in many other states face a bleak future. There is much uncertainty in the national economic picture: interest rates, tax policies, labor negotiations, foreign exchange rates and commodities prices are only a few important factors considered in the forecast, any of which could dampen Arizona's prospects. Barring any major disruptions, the outlook for the state is bright.

MARICOPA COUNTY, 1984-1985

Phoenix, as the state capital and home of the state's largest banks, is the traditional economic hub of Arizona. In spite of this, some observers believe that Phoenix is still developing as a regional commercial center. Growing evidence suggests this evolution will continue through the next two years and beyond. All types of business and financial services will expand rapidly while Phoenix asserts its leadership role in the economy of the Southwest.

This process is currently the major force shaping the local economy and will have an impact on a variety of industries, ranging from manufacturing to personal services. Maricopa County's finance and insurance sector is expected to create over 3,000 new jobs by the end of 1985. Business services employment will continue to boom at an annual rate exceeding 6 percent. The location and expansion of national credit card operations in the Phoenix area, a trend that shows no signs of abating, is another source of new jobs.

As the volume of business transacted in the Valley rises, business-related travel will increase accordingly. Despite grim conditions nationally, airlines continue to expand operations at Sky Harbor Airport at a rapid pace. Recreational travel will show similar growth due to the expected return to pre-recession levels of winter tourism.

Hotels and resorts will share in the growth generated by the business expansion in Maricopa County and the improvement in seasonal demand will boost employment even more. These factors, combined with plans for current and future hotel/motel development, will result in job growth of over 9 percent in 1984 and nearly 7 percent in 1985. The restaurant business will expand rapidly -- local demand is strong and the growth in business and tourist activity implies even more gains in the near future. The increasing success of the Valley in attracting major conventions, especially during the traditionally slow season, will help to smooth the conventional seasonal pattern.

The well-publicized high-technology manufacturing sector is expected to respond to the improving national economy by expanding operations in Maricopa County over the next two years. Many of the new jobs with electronics firms will be located in the Black Canyon corridor and the East Valley area. Much of the employment generated by defense contractors will be in the same areas. Overall, employment growth in the high-technology businesses will approximate 6 percent annually, with over 5,000 new jobs added by the end of 1985.

The air of uncertainty currently surrounding the national economy affects construction and government more than most other sectors. Construction employment is so sensitive to interest rates and the cost of materials that weakening financial markets could easily reverse the gains expected in this sector. Assuming a relatively stable money market, growth should continue strongly this year before leveling off in 1985. Federal deficits will squeeze the government's hiring activity as well as the nation's financial markets, while budget tightness at the state and local levels will hold employment in the public sector below that might be expected in an otherwise favorable climate. Phoenix, as the state's capital, will enjoy a disproportionate share of whatever growth occurs in the state government's work force.

After a couple of relatively slow years, 1983 was a welcome beginning to the expansion of job opportunities that will continue in Maricopa County through next year. Unemployment, currently below 5 percent, will stay relatively low, with any increase resulting more from rapid labor force growth rather than from poor economic conditions. The generally favorable outlook for employment in the county will continue into the future as the area's economic advantages become more prominent.

About 75 percent of the 100,000-plus jobs to be created in Arizona during the next two years will be in Maricopa County. Already the most diverse in the state, Maricopa County's economy will become even more complex in the next two years as Phoenix assumes its natural role as the center for the economy of the desert Southwest. This diversity will ensure a dynamic growth pattern and minimize the negative effects that would result from a downturn in the national economy. Job prospects in the months ahead appear to be very good and employment in Maricopa County is expected to grow at a healthy rate into 1985 and beyond.

PIMA COUNTY
1984-1985

The recovery that began in Pima County in 1983 is expected to continue for the next two years. Total wage and salary employment should grow by a healthy 8.0 percent in 1984 and a strong 3.5 percent in 1985, resulting in 17,000 new jobs by the end of 1985. The county's economy is continuing to mature and diversify. As a result, industries such as trade, services, manufacturing and finance, insurance and real estate will be the strongest performers. Construction and transportation, communications and public utilities are also expected to do well. Mining is the only industry that will probably not participate in the county's growth in the near future.

If interest rates remain fairly stable, then construction should continue to expand. It is anticipated that employment will average around 17,100 for 1984, up from 1983's level of 14,800. While this appears to be a huge increase, it is important to note that employment averaged around 16,000 for the last half of 1983. By the end of 1984 or the beginning of 1985, employment should peak and begin a slight decline. For 1985, the average level of employment should be virtually unchanged from 1984. At this time, it appears not all types of construction -- residential, commercial and heavy -- will participate in the industry's growth.

Trade and service employment should grow 5.8 percent and 4.6 percent, respectively, in 1984. This is the result of not only a continuing strong national economy but population growth as well. Over the next two years, employment in these two industries should increase by around 9,200. The only negative influence on these industries is the weakness of the peso. It appears that the peso has achieved some stability in relation to the dollar but it may be some time before Mexican nationals again trade heavily in the county. Also, as the county's economy grows and matures, it may well be that the effect of this lost trade will decline.

An industry that has exhibited strong growth in recent years is manufacturing. This trend should continue into 1985 as well. This year will see around 1,000 new jobs, mostly in the high tech related industries. Likewise, 1985 will see an additional 1,300 jobs created. Given the current commitment to strengthening the nation's defenses and the growth in computer technology, manufacturing in the county will continue to expand and play an important role in the county's economic development.

Accompanying the increase in importance of manufacturing in Pima County is the increase in financial services being offered locally. Until recently, most of the state's financial business was conducted in Phoenix. The growth in the Tucson area has encouraged banks and other financial institutions to open and expand operations. The next two years should see a continuation of this trend. Finance, insurance and real estate will see an increase in employment of around 1,000 over the next two years. This employment growth is also the result of expected strong housing sales, especially in 1984.

Two other areas that will show moderate growth in 1984 and 1985 are transportation, communications and public utilities and government. T.C.P.U. is expected to add around 600 new workers by 1985. Government will show slight growth with most of the increase coming in the area of education. Overall, government is expected to add around 500 new employees in 1984 and 800 in 1985.

As previously mentioned, copper mining should continue to struggle in the near future. There is currently an excess supply of copper on the international market which has forced the price down considerably. The futures price of copper indicates that there is some possibility of recovery in late 1985. However, the next year and a half could see more layoffs. While the

forecast indicates a slight increase in employment in 1984 over 1983, this is due to statistical distortions caused by strike activity in 1983. Over the next two years, employment in mining should remain between 3,700 and 3,900.

Overall, the next two years should be a time of growth in Pima County. For 1984, the unemployment rate should fall to around 6.7 percent from 1983's rate of 8.9 percent. As the national economy slows in 1985, there may be a slight rise to around 7.1 percent. This will be largely due to new entrants in the job market outpacing the ability of the economy to absorb them rather than companies laying off existing workers.

NONMETROPOLITAN ARIZONA, 1984

The problems of the state's rural areas have been well documented in the last 12-18 months. A combination of generally slow economic growth coupled with the devaluation of the peso and copper mining layoffs has crippled many communities. While layoffs are the most often noted problem in this area, slow economic growth has been equally devastating. Statewide, the number of jobs has grown by 5.0 percent since 1980. By contrast, 7.5 percent of the jobs in nonmetropolican Arizona -- a total of 14,700 -- have been lost during the same period. Many people have either left the area or have moved to the state's metropolitan areas in search of work. The short-term problems of unemployment and under-employment will be compounded in the future as a declining labor force makes it more difficult to recruit and retain business.

Unemployment in this area is high and is not expected to decline dramatically. In January 1983, the unemployment rate in this area averaged 17.0 percent, but by December had fallen to 12.5 percent. 1984 will see little improvement in the unemployment rate as increasing job opportunities encourage people to enter the labor force in search of new jobs. Communities dependent on the copper mining industry will continue to suffer the most. Low copper prices and the resulting lack of profitability will continue to force many companies to cut staffs and reduce hours. But looking further into 1985, we expect mining employment to rise slowly.

The major source of economic strength during 1984 and 1985 will be in the services and trade sectors. Much of that will come from rising tourism activity and improving trade business across the Mexican border. For the last few years, summer tourism business has been down. But the much improved national economy as well as an increase in winter tourism point to strong summer months for the state's northern counties. It also appears unlikely that the Mexican peso will decline further in value. After a period of time, merchants on this side of the border will probably be able to recover at least a portion of the business they had lost. Although it will be quite some time before that process is completed, it has apparently started.

A final industry that will continue to retard recovery in the rural counties is government. Over 30 percent of all the jobs are in government, the largest industry by far. But reduced federal expenditures and dwindling revenue sources will further force government cutbacks. Conditions are becoming quite tight, particularly at the local government level. If it were not for rising employment levels in the schools, greater cuts would probably have occurred.

Economic improvement will remain quite slow in rural Arizona, with a 2.5 percent increase in jobs in 1984 and a 3.0 percent increase forecast in 1985. The comparable statewide figures are 5.6 and 4.2 percent. The structural shift away from copper mining and government is expected to continue as both national and local economic conditions emphasize the trade and services sectors of the area. Of all the sections of the state, our rural counties will continue to suffer the most.

Arizona Labor Force and Employment

January 1984 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Jan.* 1984	Dec. 1983	Jan. 1983	Dec. to Jan.	1983 to 1984
TOTAL CIVILIAN LABOR FORCE	1398.1	1406.5	1348.8	-8.4	+49.3
Total Unemployment	87.8	95.1	146.9	-7.3	-59.1
Rate	6.3	6.8	10.9	---	---
Rate (Sea. Adj.)**	6.1	6.9	10.7	---	---
Total Employment	1310.3	1311.4	1201.9	-1.1	+108.4

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1099.4	1115.5	1027.4	-16.1	+72.0
Manufacturing	162.0	161.7	149.1	+0.3	+12.9
Durable Goods	126.6	126.1	115.2	+0.5	+11.4
Stone, Clay and Glass	6.7	6.5	5.2	+0.2	+1.5
Primary and Fabricated Metals	14.3	14.3	14.2	+0.0	+0.1
Primary Metals	6.4	6.2	6.6	+0.2	-0.2
Fabricated Metals	7.9	8.1	7.6	-0.2	+0.3
Machinery	63.6	63.7	59.7	-0.1	+3.9
Other Durable Goods	42.0	41.6	36.1	+0.4	+5.9
Aircraft and Missiles	18.9	18.6	16.9	+0.3	+2.0
Lumber and Wood Products (Except Furniture)	6.8	6.9	5.5	-0.1	+1.3
All Other Durable Goods	16.3	16.1	13.7	+0.2	+2.6
Nondurable Goods	35.4	35.6	33.9	-0.2	+1.5
Food and Kindred Products	7.6	7.7	8.6	-0.1	-1.0
Apparel	5.6	5.6	5.0	+0.0	+0.6
Printing and Publishing	12.6	12.6	11.6	+0.0	+1.0
All Other Nondurable Goods	9.6	9.7	8.7	-0.1	+0.9
Mining and Quarrying	14.3	14.3	14.6	+0.0	-0.3
Copper Mining	11.4	11.4	11.7	+0.0	-0.3
Other Mining and Quarrying	2.9	2.9	2.9	+0.0	+0.0
Construction	81.4	82.2	66.3	-0.8	+15.1
Trans., Communications, and Public Utilities	57.6	58.0	55.9	-0.4	+1.7
Transportation	24.3	24.8	23.0	-0.5	+1.3
Communications and Public Utilities	33.3	33.2	32.9	+0.1	+0.4
Trade	266.5	271.4	252.5	-4.9	+14.0
Wholesale Trade	54.0	53.6	50.4	+0.4	+3.6
Retail Trade	212.5	217.8	202.1	-5.3	+10.4
General Merchandise and Apparel	37.0	40.5	37.6	-3.5	-0.6
Food Stores	33.8	34.4	33.1	-0.6	+0.7
Automotive and Service Stations	24.5	24.5	23.5	+0.0	+1.0
Eating and Drinking Places	74.5	74.4	68.2	+0.1	+6.3
Other Retail Trade	42.7	44.0	39.7	-1.3	+3.0
Finance, Insurance, and Real Estate	66.9	67.0	63.1	-0.1	+3.8
Services and Miscellaneous	248.4	247.5	227.2	+0.9	+21.2
Hotels and Other Lodging Places	25.6	25.3	23.5	+0.3	+2.1
Business Services	49.8	49.9	42.9	-0.1	+6.9
Health Services	66.1	65.9	62.9	+0.2	+3.2
Other Services	106.9	106.4	97.9	+0.5	+9.0
Government	202.3	213.4	198.7	-11.1	+3.6
Federal	39.1	39.1	37.7	+0.0	+1.4
State and Local	163.2	174.3	161.0	-11.1	+2.2
School	98.1	109.3	95.9	-11.2	+2.2

* Preliminary
** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Data have been adjusted to the 1972 Standard Industrial Classifications (SIC).

January 1984 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Jan.* 1984	Dec. 1983	Jan. 1983	Dec. to Jan.	1983 to 1984	Jan.* 1984	Dec. 1983	Jan. 1983	Dec. to Jan.	1983 to 1984
878.6	881.5	828.4	-2.9	+50.2	259.6	261.2	251.8	-1.6	+7.8
43.1	46.6	72.1	-3.5	-29.0	15.3	16.6	27.8	-1.3	-12.5
4.9	5.3	8.7	---	---	5.9	6.4	11.0	---	---
4.8	5.4	8.5	---	---	5.8	6.5	11.0	---	---
835.5	834.9	756.3	+0.6	+79.2	244.3	244.6	224.0	-0.3	+20.3

FOR ECONOMIC ASSISTANCE PROGRAMS.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

714.8	724.5	659.2	-9.7	+55.6	203.5	206.8	190.8	-3.3	+12.7
117.1	116.6	107.5	+0.5	+9.6	27.5	27.8	25.4	-0.3	+2.1
92.4	91.8	84.7	+0.6	+7.7	22.8	22.8	20.7	+0.0	+2.1
4.1	3.9	3.1	+0.2	+1.0					
9.0	9.2	9.4	-0.2	-0.4					
50.9	50.7	47.3	+0.2	+3.6					
28.4	28.0	24.9	+0.4	+3.5					
24.7	24.8	22.8	-0.1	+1.9	4.7	5.0	4.7	-0.3	+0.0
5.1	5.2	5.9	-0.1	-0.8					
3.3	3.2	2.4	+0.1	+0.9					
9.4	9.4	8.5	+0.0	+0.9					
6.9	7.0	6.0	-0.1	+0.9					
0.6	0.6	0.6	+0.0	+0.0	3.6	3.6	3.9	+0.0	-0.3
56.8	57.5	46.4	-0.7	+10.4	16.4	16.4	12.1	+0.0	+4.3
37.4	37.6	35.5	-0.2	+1.9	8.8	8.8	8.6	+0.0	+0.2
16.3	16.6	15.0	-0.3	+1.3	3.8	3.8	3.6	+0.0	+0.2
21.1	21.0	20.5	+0.1	+0.6	5.0	5.0	5.0	+0.0	+0.0
180.9	184.7	170.1	-3.8	+10.8	43.9	44.9	42.4	-1.0	+1.5
42.2	42.1	39.3	+0.1	+2.9	6.4	6.4	5.7	+0.0	+0.7
138.7	142.6	130.8	-3.9	+7.9	37.5	38.5	36.7	-1.0	+0.8
23.5	26.5	24.4	-3.0	-0.9	6.9	7.3	6.8	-0.4	+0.1
21.8	22.3	21.2	-0.5	+0.6	5.4	5.6	5.4	-0.2	+0.0
15.7	15.7	14.7	+0.0	+1.0	4.0	4.0	4.0	+0.0	+0.0
48.0	47.5	43.2	+0.5	+4.8	13.7	13.7	13.4	+0.0	+0.3
29.7	30.6	27.3	-0.9	+2.4	7.5	7.9	7.1	-0.4	+0.4
52.3	52.3	49.4	+0.0	+2.9	9.5	9.6	8.6	-0.1	+0.9
168.6	167.9	151.3	+0.7	+17.3	47.4	47.3	44.4	+0.1	+3.0
15.7	15.4	14.2	+0.3	+1.5	4.3	4.3	3.9	+0.0	+0.4
41.2	41.4	35.4	-0.2	+5.8	6.9	6.9	6.0	+0.0	+0.9
44.6	44.3	41.7	+0.3	+2.9	13.8	13.7	13.7	+0.1	+0.1
67.1	66.8	60.0	+0.3	+7.1	22.4	22.4	20.8	+0.0	+1.6
101.1	107.3	98.4	-6.2	+2.7	46.4	48.4	45.4	-2.0	+1.0

-- Prepared by Labor Market Information, Research and Analysis (CPS-MOD, 1/84)

NONMETROPOLITAN COUNTIES LABOR FORCE AND EMPLOYMENT
January 1984 (Preliminary)

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	14,650	28,800	33,075	14,400	7,650	3,925	4,725
Total Unemployment	2,150	2,700	3,300	2,350	850	300	650
Rate	14.7%	9.4%	10.0%	16.3%	11.1%	7.6%	13.8%
Rate (Seas. Adj.)**. . . .	14.2%	9.0%	9.0%	15.3%	11.2%	7.3%	-INA-
Total Employment	12,500	26,100	29,775	12,050	6,800	3,625	4,075
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY. . . .	12,875	20,975	27,650	9,600	4,250	3,100	2,325
Manufacturing.	625	1,425	2,500	1,450	100	350	100
Mining and Quarrying	50	350	50	1,475	75	1,650	0
Construction	1,450	850	900	400	100	25	50
Trans., Comm., & Pub. Util..	1,625	1,275	2,125	275	150	50	50
Trade.	1,050	4,350	6,525	1,700	1,150	325	800
Fin., Insur., & Real Estate.	150	600	575	225	100	50	100
Services and Miscellaneous .	3,175	2,600	6,150	1,500	700	100	650
Government	4,750	9,475	8,825	2,575	1,875	550	575

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	21,750	24,825	30,950	8,975	31,075	35,100
Total Unemployment	2,675	3,050	4,025	1,375	2,425	3,550
Rate	12.3%	12.3%	13.0%	15.3%	7.8%	10.1%
Rate (Seas. Adj.)**. . . .	11.7%	11.2%	12.9%	17.1%	6.9%	-INA-
Total Employment	19,075	21,775	26,925	7,600	28,650	31,550
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY. . . .	14,375	16,750	22,475	7,525	16,950	22,525
Manufacturing.	2,100	1,650	2,575	875	1,950	1,675
Mining and Quarrying	250	1,075	4,050	25	1,050	50
Construction	800	550	600	200	900	1,400
Trans., Comm., & Pub. Util..	900	1,575	1,000	550	875	975
Trade.	4,100	2,925	3,825	3,225	4,425	7,425
Fin., Insur., & Real Estate.	700	275	700	225	700	725
Services and Miscellaneous .	2,675	4,500	2,150	1,050	3,100	4,075
Government	2,850	4,200	7,575	1,375	3,950	6,200

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ARIZONA LABOR FORCE AND EMPLOYMENT FOR ECONOMIC ASSISTANCE PROGRAMS
December 1983 (Final)

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,406,501	1,311,422	95,079	6.8%
Apache	14,883	12,712	2,171	14.6
Cochise	28,983	26,122	2,861	9.9
Coconino	34,488	31,020	3,468	10.1
Gila	14,660	11,820	2,840	19.4
Graham	7,774	6,760	1,014	13.0
Greenlee	3,827	3,563	264	6.9
La Paz	4,784	4,113	671	14.0
Maricopa	881,506	834,917	46,589	5.3
Mohave	21,975	19,268	2,707	12.3
Navajo	24,710	21,798	2,912	11.8
Pima	261,166	244,523	16,643	6.4
Pinal	31,645	27,186	4,459	14.1
Santa Cruz	8,990	7,254	1,736	19.3
Yavapai	31,298	28,909	2,389	7.6
Yuma	35,812	31,457	4,355	12.2

Data have been adjusted to the 1972 Standard Industrial Classification (SIC). These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ESTIMATED HOURS AND EARNINGS OF PRODUCTION WORKERS IN SELECTED INDIUSTRIES IN ARIZONA
January 1984

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	JAN.* 1984	DEC. 1983	JAN. 1983	JAN.* 1984	DEC. 1983	JAN. 1983	JAN.* 1984	DEC. 1983	JAN. 1983
FOR THE STATE OF ARIZONA*									
Manufacturing	371.16	385.62	346.81	40.3	42.1	39.5	9.21	9.14	8.78
Aircraft & Missiles	518.87	566.40	480.24	44.5	47.2	43.5	11.66	12.00	11.04
Food & Kindred Products	319.92	325.51	331.66	37.2	41.1	41.2	8.60	7.92	8.05
Primary Metals	485.47	505.60	456.61	38.9	40.0	38.5	12.48	12.64	11.86
Machinery	341.90	347.66	318.40	40.8	41.2	38.5	8.38	8.42	8.27
Copper Mining	537.14	572.90	523.30	39.7	42.5	40.1	13.53	13.48	13.05
Construction	417.56	439.24	473.24	36.5	37.8	36.6	11.44	11.62	12.93
Utilities	554.18	544.32	471.24	44.8	44.8	42.0	12.37	12.15	11.22
Retail Trade**	207.01	207.26	204.90	32.6	32.6	33.7	6.35	6.35	6.08
Wholesale Trade	347.65	343.07	332.24	40.9	40.6	39.6	8.50	8.45	8.39

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. All data have been adjusted to the 1972 Standard Industrial Classifications (SIC).

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/83)

THE ARIZONA LABOR FORCE IN JANUARY 1984

The unemployment rate dropped significantly in January, falling from 6.9 to 6.1 percent. While this decline continues to indicate the overall economic improvement the state has observed for the last six-to-nine months, our optimism is more cautious this month. Much of the improvement was related to heavy seasonal activity that occurs at this time of the year in schools, retail trade businesses and construction. In general, although we expect hiring to improve in 1984, it appears that the unemployment rate statewide and in the two metropolitan areas will not fall much further this year.

Historically, we see large employment drops in January that are related to the Christmas season and our winter weather--particularly among many retail trade businesses. Temporary staffs are hired in October and November, but when the Christmas rush is done, those staffs are reduced. While that continues to be the case, the magnitude of these swings has decreased in the last few years. Many companies seem less interested in hiring seasonal workers than was true a few years ago, thus reducing the large seasonal layoffs that have usually occurred at the first of the year. Therefore, our seasonal adjustment process tends to overstate improvements in the economy following the holidays.

Much the same situation seems to be happening in the schools. Many teachers, who are hired on semester-to-semester contracts, were formerly not on the payroll during Christmas break. But due to many different factors, that trend also seems to be declining.

A final industry that usually experiences significant employment losses in January is construction. A combination of cold winter weather in the state's northern counties and rain in the metropolitan areas usually reduces the amount of work being done. But again in this industry, unusual seasonal activity has kept employment from falling. The metropolitan areas have enjoyed an unusually dry January and February, while the winter cold has not cut as deeply as usual into building activity in the north.

But it would be unfair to characterize all of the improvement in January's unemployment rate as being the result of unusual seasonal activity. In addition to the less-than-usual drops mentioned, both the services and manufacturing industries showed improvement. This was particularly true in Maricopa County where a few large electronics firms continued to expand. If any sector of our economy looks particularly strong, it must be our high technology (electronics and aerospace) manufacturers, and services. Both industries are experiencing strong and growing demand for their products. And in services, the labor-intensive nature of its work will create a large number of jobs.

January's decline in unemployment probably does not indicate what we can expect throughout the year. Part of the improvement was related to unusual seasonal activity that will not be repeated. As well, the relatively low unemployment rates in Tucson and Phoenix will not fall much further. People who had left the labor force when unemployment rates were high are beginning to reenter the labor market in search of employment. In addition, the decline in our unemployment rate is beginning to attract people to our state from other areas. The net result is that although the economy will continue to create a large number of jobs in 1984, the unemployment rate cannot be expected to fall appreciably in the months ahead.

ARIZONA UNEMPLOYMENT INSURANCE ACTIVITIES - DECEMBER

	December 1983	November 1983	December 1982	% Change From One Year Ago
Arizona Claimants Served**	36,714	32,969	74,799	-50.9%
Arizona Average Weeks Unemployed***	9.8	9.9	10.5	- 6.7%
Arizona Benefits Paid**	$ 12,165,136	$ 10,677,360	$ 26,071,264	-53.3%
Arizona Trust Fund Balance	$165,815,096	$173,108,109	$203,655,116	-18.6%

*Estimated **All Programs ***UI Only

WHAT IS THE MODEL?

When the topic turns to forecasts, in particular, economic forecasts, a veil of mysticism seems to surround them. Thoughts of crystal balls, computers and analysts who are somehow able to see into the future give forecasting an aura that is often undeserved. There are, of course, many ways to make forecasts. At one extreme, forecasts can be completely subjective as the analyst uses his or her knowledge of history and current events to make prognostications. This method is fast, inexpensive and many times just as reliable as far more sophisticated approaches. But on the negative side, these forecasts can easily produce inconsistent outputs and they often suffer from biases of the individual forecaster. At the other extreme, large econometric models that require significant computer resources are another possibility. They have the advantage of producing consistent forecasts that minimize reporting bias. Unfortunately, their complexity makes them expensive to operate and difficult to interpret, and they produce forecasts that may be only marginally superior to alternative methods.

So with all of that, how did we generate the forecasts contained in this issue of the NEWSLETTER? Actually, we used a combination of both methods, with most of the emphasis being placed on the econometric approach. Although the actual operation of the model is quite complex, its approach is fairly straightforward. First, we have divided the state into three separate pieces--Maricopa County, Pima County, and the balance of the state. Within each of these three geographic areas, the industries have been analyzed to determine if the demand for their goods and services is from the local population or from external groups. For example, the demand for copper or semiconductor components comes mostly from consumers outside Arizona. These sectors we label as basic industries. Other industries, such as automotive repair, derive most of their demand from local residents. These sectors are called nonbasic industries.

The next step in the process involves the identification of variables that importantly contribute to employment changes in local industries. At this point the work is part science, part art. For the industries labeled basic, we look for variables at the national and international level that help to explain employment changes. In the copper industry, the world supply of copper, copper prices and the number of automobiles or homes constructed are fairly obvious candidates. Some of these variables work well, others do not. But after going through a statistical procedure known as multiple regression, one equation is selected to explain employment changes in the copper industry. After this has been done for all the basic industries (there are 59 of them), it is time to start estimating equations for the nonbasic industries.

Here we look for local forces like population, total employment and other such variables to help explain employment changes. Again, after a number of multiple regression equations are calculated, one equation is selected to explain a sector such as food stores. A final area covers those businesses that are both basic and nonbasic. Classic examples are eating and drinking establishments. Part of the demand for their services comes from local residents who are interested in eating out on occasion. That component would be labeled nonbasic. But part of their business is basic because they are providing meals to tourists who bring money from outside the state and spend it here. In these cases, the equations usually contain variables that are both local and national in scope.

After all these equations have been estimated, the job is still far from complete. All of these equations are placed in a computer program that actually performs the process. But before this can be done, the national and international variables that affect our basic industries must be forecast. These exogenous variables come from outside the model and obviously have an important impact. To the degree they are accurate, they should help make our local forecasts more accurate. Currently, we use the Control Solution generated by Data Resources, Inc. (DRI), a widely respected private forecasting company. With national variables such as gross national product, interest rates, housing starts, and the level of income being derived from DRI, our model derives the locally determined, endogenous variables. Up to this point, the process has been fairly mechanical. Except for the selection of variables to include in each equation, very little subjectivity has been involved. But before the forecasts can be accepted, the analyst must review them.

Some, we hope most, of the different equations will yield reasonable estimates. But the model is not totally knowledgeable. Certain events are outside the scope of the model because only a limited number of variables can be used. For example, we know that the Palo Verde Nuclear Power Plant is currently under construction, but at some point in the future the construction phase will be completed and the operation phase will begin. The analyst will likely have to take some control over the model, reducing construction at appropriate times by appropriate amounts and increasing utility employment appropriately. If the model has been constructed properly, this part, although very important, should not have to be performed often. And the employment changes in associated industries such as lumber, food stores and government will be handled by the model.

With all of this done, the forecasts are ready for presentation. It requires a lot of effort, in terms of both staff and computer resources, but our experience over the past few years has been very positive. We use the results not only for our semi-annual employment forecasts, but also for occupational demand forecasts and occupational supply/demand forecasts. It has become an integral part of Labor Market Information. Each year we take each equation, all 209 of them, and re-estimate. It's a credit to those who have worked on

the model before that very little is changed from year to year.

In addition to these forecasts, the model is also used to investigate alternative scenarios about Arizona's economy. Such questions as the impact of a continued national recession or a significant drop in interest rates can all be analyzed with the help of the model. It gives us a structure around which economic questions can be analyzed. While accuracy is quite important, the model also gives us a framework to better understand how our economy has developed and what impact we can expect from particular changes.

	1983 PRE-BENCHMARK	1983 FORECAST	1983 POST-BENCHMARK	PRE - POST DIFFERENCE		FORECAST-POST DIFFERENCE	
				Number	Percent	Number	Percent
ARIZONA							
Wage & Salary	1045.0	1043.4	1064.4	19.4	1.9	21.0	2.0
Manufacturing	152.6	154.7	155.7	3.1	2.0	1.0	0.6
Mining	15.5	16.4	14.2	(1.3)	(8.4)	(2.2)	(15.5)
Construction	72.4	68.2	76.4	4.0	5.5	8.2	10.7
T.C.P.U.	55.4	57.1	56.0	0.6	1.1	(1.1)	(2.0)
Trade	257.0	256.7	257.3	0.3	0.1	0.6	0.2
F.I.R.E.	62.7	60.7	65.4	2.7	4.3	4.7	7.2
Services	226.8	224.4	237.4	10.6	4.7	13.0	5.5
Government	202.8	205.2	202.1	(0.7)	(0.3)	(3.1)	(1.5)
MARICOPA							
Wage & Salary	666.7	663.8	686.8	20.1	3.0	23.0	3.3
Manufacturing	109.6	111.1	112.2	2.6	2.4	1.1	1.0
Mining	0.6	0.6	0.6	0.0	0.0	0.0	0.0
Construction	49.2	46.1	53.2	4.0	8.1	7.1	13.3
T.C.P.U.	34.9	35.9	35.8	0.9	2.6	(0.1)	(0.3)
Trade	171.5	171.3	173.9	2.4	1.4	2.6	1.5
F.I.R.E.	48.4	47.3	51.1	2.7	5.6	3.8	7.4
Services	150.8	147.8	159.0	8.2	5.4	11.2	7.0
Government	101.6	103.7	101.0	(0.6)	(0.6)	(2.7)	(2.7)
PIMA							
Wage & Salary	195.0	195.1	196.7	1.7	0.9	1.6	0.8
Manufacturing	26.3	26.9	26.5	0.2	0.8	(0.4)	(1.5)
Mining	3.5	4.4	3.6	0.1	2.9	(0.8)	(22.2)
Construction	14.1	12.6	14.7	0.6	4.3	2.1	14.3
T.C.P.U.	8.6	9.1	8.5	(0.1)	(1.2)	(0.6)	(7.1)
Trade	43.3	44.2	43.0	(0.3)	(0.7)	(1.2)	(2.8)
F.I.R.E.	9.2	8.6	9.2	0.0	0.0	0.6	6.5
Services	44.6	43.8	45.8	0.8	1.8	2.0	4.4
Government	45.5	45.5	45.4	(0.1)	(0.2)	(0.1)	(0.2)

Construction - A project to build 580 residential units atop Flagstaff's McMillan Mesa has been proposed by a California group. Plans for the 134-acre development also include commercial and recreation areas.

Planning for AgroCenter Arizona, a $25 million project combining urban development with agriculture, is under way in Eloy. When eventually completed, the project will feature urban residences, a county inn, and recreational attractions in a 1,000-acre core area. Surrounding the core area will be an arid lands research project. About 4,000 acres will be divided into 80-acre "farmettes."

Construction has begun on Star Distribution Corp.'s $1.7 million distribution center at Williams Field Road Business Park in Chandler. The 70,000 square-foot structure is the first building in the 65-acre Chandler park.

Plans have been announced for a 46-story, $47 million apartment building in downtown Phoenix. The 694-foot high-rise, planned for the southeastern corner of Fillmore Street and Second Avenue, would be the city's tallest building and the first major residential construction project in the downtown area in many years. The developer is seeking $42.4 million in tax-exempt bonds to help finance the project.

Printing - Gannett Co. Inc., the Rochester, N.Y.-based media giant and publisher of the one-year-old USA Today newspaper, is planning to build a printing plant in Chandler. The company has purchased a site on Williams Field Road near Interstate 10 to construct the facility. It is estimated that the plant will have a staff of 131 employees.

Hotels - A $4.6 million urban development single construction project in Arizona, has been approved for a $20 million resort complex to be built in El Mirage. The grant, to be made to the city, will fund a loan to be made to the developers to encourage them to build the project in El Mirage.

Construction has begun on the 272-room Fiesta Hilton Hotel in Mesa. When completed in December 1984, it will be the largest hotel in the East Valley.

Lumber - The Evergreen Lumber Co. has begun operations on a year-round basis at its Williams facility due to the addition of lumber-drying equipment which permits the plant to remain open instead of routinely closing during the winter.

The modifications will increase output from the current 12 million board-feet per year to about 30 million. When a second shift is added early this summer, the company expects to hire an additional 55 employees.

Manufacturing - GTE Corp. has announced that it will move the world headquarters of its Communications Systems division to Phoenix from Stamford, Connecticut, and expand its research operations in the Valley. The move will involve relocating about 70 executives to Phoenix and hiring about 160 engineers and technical employees locally by the end of 1984.

The division to be relocated has 29,000 employees worldwide and makes and services systems and equipment for voice, data and video telecommunications. GTE presently employs 600 workers at its Network Systems division in Phoenix and 400 at its Microcircuits operation in Tempe. Both operations are part of the $2.5 billion division that is relocating.

Intel's Chandler plant expects to hire 600 to 800 workers, mostly in engineering and technical-professional fields, during the next 18 months as part of a major expansion of its Chandler operations. Much of the growth will be due to the firm's $35 million expansion, which includes transferring its components assembly test operations to Chandler from Intel's headquarters in Santa Clara, California. About 200 employees will transfer from Santa Clara to Chandler by June.

AiResearch Manufacturing Co. has leased a large building at Tucson International Airport and will have up to 500 employees in Tucson by the end of 1984. The firm, a division of the Garrett Corp., has announced that engineers, electronics assemblers, technicians, salesmen, purchasing agents and clerks will be hired this year. The company estimates that it will have 4,000 Tucson employees within a decade.

AiResearch plans to begin building its own plant in Northwest Tucson this spring. The company will manufacture electronic components for the aerospace industry.

High Tech Report Available - A recently completed survey of 24 Arizona companies that together represent over 75 percent of the state's high tech employment reveals that these Arizona firms spent almost a $1 billion on key production items in 1982, with more than $820 million purchased from out-of-state suppliers. The survey is an updated and expanded report of the 1981 market study by the Arizona Office of Economic Planning and Development which examined where Arizona's high technology manufacturers purchase their supplies.

Copies of the report are available by writing to Barbara Orr at OEPAD, 1700 W. Washington Street, Phoenix, Arizona 85007.

Automobiles - The Ford Motor Co. will begin construction this month of a $500 million assembly plant in Hermosillo, using Mexican labor to assemble a Japanese-designed car for sale principally in the U.S. When production begins in three years, most of the cars will be shipped to the U.S. by train, probably through El Centro, California. Southern Arizona's retail sector, especially, should benefit from the 3,000-worker plant. Additional economic consequences are as yet unclear.

Tribal Economic Development - The Navajo Tribe is considering developing a resort and marina on the shores of Lake Powell that could cost about $19 million. The site under consideration is Antelope Point, about five miles from Page, where the tribe owns a lengthy section of land near the shoreline. Discussions have begun with the U.S. Park Service, which controls the shoreline itself, and planning is expected to take about one year.

The tribe has indicated that it probably would contract for the operation of the resort. Among the groups that has expressed an interest is the Del E. Webb Corp., which operates all the marinas on the lake.

The University of Arizona has been awarded a $651,000 grant to help Indians develop economic self-sufficiency. The three-year grant, awarded by the W.W. Kellogg Foundation, is aimed at assisting Indians in Arizona, Nevada, New Mexico and California in a number of areas, including building projects for business and growing of the oil-producing plant jojoba.

Hiring Incentive - A program to divert to an employer the cash welfare grant of an Aid to Families with Dependent Children (AFDC) recipient was begun by the Department of Economic Security on March 1st. Called "The Right Change," the program provides to the employer of an AFDC recipient a cash incentive for a period of six months. DES is conducting the program under a three-year federal grant and has targeted 750 job placements during the first year of operation.

For more information, contact Gloria Young, Project Director, at 255-4494.

Job Workshop - A free job search workshop intended to help displaced homemakers develop the skills required to find employment will be held in Tucson April 2 through 13 by PHASE (Project for Homemakers in Arizona Seeking Employment). Advance registration is required. To register, call 621-5008 or 621-3902.

Technology Center - The Greenlee County Technology Center opened in late January. The Center was cooperatively developed by Clifton Unified Schools and the Greenlee County Job Training Partnership Act to provide training in new fields of technology for JTPA participants and other interested persons and to promote the economic development of Greenlee County.

The Technology Center offers course clusters in computers in business, computers in science, computers in industry and secretarial and clerical.

Union Contracts - Plumbers represented by the 1,900-member Plumbers and Pipefitters Local 469 have agreed to large pay cuts to meet competition from non-union contractors. The contract, which runs through June 30, 1985, covers union plumbers in the Phoenix area and most of the northern part of the state. The new wage for industrial and commercial work is $15 an hour, down from $19.84, a 24 percent cut. For residential work, the rate drops to $12.50 an hour from $19.84, a 37 percent decrease.

For the first time since 1978, pay raises for union workers lagged behind those for non-union workers according to a study by the U.S. Bureau of Labor Statistics. The BLS report found that wages and salaries paid to workers covered by union contracts advanced 4.6 percent in 1983, while the gain for non-union workers was 5.2 percent.

Earlier, the BLS announced that the three million workers whose wages were negotiated by unions in 1983 accepted first-year pay boosts averaging 2.6 percent, the lowest settlements in the 16 years that the government has kept these records.

State Retirement - According to the Arizona State Retirement System, an unpredictably large number of people took advantage of an incentive program for early retirement last year. Of the 14,700 government workers eligible for early retirement during 1983, 17 percent took advantage of the higher benefits. Similar plans in other states have been utilized by about 10 percent of the eligible employees. City and county workers made up 38 percent of the early retirees, teachers 34 percent and state workers 28 percent.

Unemployment Insurance - Unemployment tax rates for about 59,000 Arizona businesses will increase an average of 70 percent this year. The average rate employers will pay into the fund will rise to 1.88 percent from 1.05 percent of the first $7,000 earned by a worker. The increases will produce a total of $124 million in 1984 instead of the $66 million that would have been collected under the old tax rates. The increases will help replenish the unemployment-insurance fund, which paid out a record $170 million in 1982 and $132 million last year.

Employers will feel the increase in April when the first quarter of 1984 ends and they are asked to pay into the unemployment-insurance fund.

Mine Closes - The Cyprus Bagdad Copper Mine closed indefinitely on February 11th, idling 550 workers. About 150 employees will continue to work at the mine, producing copper cathodes and providing security and maintenance.

The shutdown puts employment of copper miners in Arizona at 12,050, lower than it has been in 25 years, excluding periods when many workers in the industry were on strike.

Layoffs - Levy's department store has laid off about 25 employees due to a transfer of certain functions from its Tucson warehouse to a distribution center in Dallas. Affected employees will receive a month's pay plus an average of 11 to 12 weeks' severance pay.

Pacific Motor Trucking Co. has eliminated its division which handled freight weighing less than 10,000 pounds. The cutback affected some 16 employees in Tucson and 13 in Phoenix. The division lost at least $12 million in 1983.

Strike Update - No progress has been reported in the months-long stalemate between the Phelps Dodge Corp. and 13 striking unions. Reinstatement of seniority and cost-of-living adjustments for copper miners appear to be the major issues delaying an agreement. In attempts to break the deadlock, Governor Babbitt met last month with Frank McKee, international treasurer of the United Steelworkers of America, and with Kay McMurray, chief of the federal Mediation and Conciliation Service. In his meeting with McMurray, Babbitt suggested that the strike negotiations be moved to Washington in hopes of breaking the stalemate.

ARIZONA LEGISLATIVE UPDATE: PROPOSED LEGISLATION

In the current session of the Arizona Legislature, the following measures have been introduced which may be of interest to our readers:

SB 1010 - Would repeal the Little Davis-Bacon Act which requires payment of prevailing wages for public construction projects. This usually means that union salary schedules must be met (Hill, R-Tucson).

SCR 1001 - The companion resolution to SB 1010 that would submit the repeal of Little Davis-Bacon to the voters on the November general election ballot (Hill, R-Tucson).

SB 1122 - Would provide a tax deduction for those who serve as law enforcement volunteers (DeLong, R-Tucson).

SB 1163 - Families who place children in child care due to employment would receive state income tax break (Hill, R-Tucson).

SB 1175 - Another version of SB 1163 (DeLong, R-Tucson).

HB 2308 - Would allow the state attorney general to enforce Arizona's right-to-work law. The measure consists of a series of statutes, ranging from a provision that precludes any person from having to join a labor union in order to work to various laws regarding picketing (Skelly, R-Scottsdale).

HB 2310 - The companion measure to HB 2308 that would stiffen the penalties for illegal picketing and provide for a 1-1/2-year prison term for using force while picketing (Skelly, R-Scottsdale).

SCR 1012 - Constitutional amendment accompanying a senate bill. This would place into the Arizona Constitution a prohibition on public employee strikes and would strip a striking employee of his job seniority and all benefits. The person could be rehired, but only at a lower pay grade. This measure is similar to the strike ban endorsed by Phoenix voters in a city election last November. If passed by both the Senate and House, the proposed amendment would go to voters on the November general election ballot (Mawhinney, R-Tucson).

HCR 2013 - Similar to SCR 1012, the person could not be hired again by any government agency for a year (Skelly, R-Scottsdale).

HB 2006 - If approved, would give tax breaks to businesses that hire displaced homemakers (Herstam, R-Phoenix).

SB 1004 - Persons over 65 would be allowed to deduct $2,500 from their retirement benefits (excluding Social Security) before computing state taxes. Pensions of state employees and elected officials retiring after January 1, 1984 would be subject to state tax after the $2,500 deduction. Such retirement income is presently exempt (Hill, R-Tucson).

SB 1031 - Teachers who work more than 40 percent of the school year would be permitted to continue as tenured employees of the district, thereby facilitating job-sharing arrangements (Harelson, R-Tempe).

HB 2468 - Would instruct the Arizona Department of Administration to set salaries for state employees and officers based on a factor related to the average income of a family of four in the U. S. (Kromko, D-Tucson).

HB 2448 - If approved, would require the Department of Health Services to instruct group insurance providers to work with businesses and employees toward establishing preventive programs and health "workshops" in an attempt to improve employee health and cut health insurance costs (Resnick, D-Tucson).

HB 2058 - Would provide for State Board of Directors of Community Colleges to allocate and use start-up monies for needed vocational and technical education at community colleges and would allow for district-to district moving of state-purchased equipment. If training is for new, emerging or expanding occupations, state monies would have to be matched by industry served by that occupation. An apropriation is provided (Cooper, R-Mesa).

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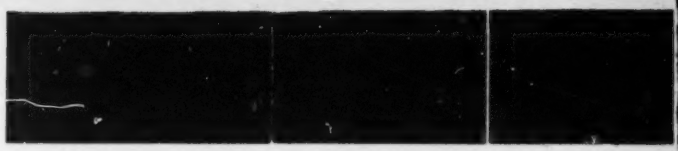

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Arizona Labor Market NEWSLETTER

Arizona Department of Economic Security

Vol. VIII No. 4
April 1984

Unemployment Rate

Seasonally Adjusted
February*

ARIZONA	5.6%
Maricopa Co.	4.3%
Pima Co.	5.2%
UNITED STATES	7.8%

Consumer Price Index

National-January
1967 - Base Year

Wage Earner/Clerical Worker -	302.7
% Chg. Yr. Ago	3.6
All Urban -	305.2
% Chg. Yr. Ago	4.1

Phoenix-4th Qtr.
1977 - Base Year

All Urban -	174.1
% Chg. Yr. Ago	4.1

Producer Price Index

National-February*
1967 - Base Year

All Commodities-	308.8
% Chg. Yr. Ago	2.6
Finished Goods -	290.6
% Chg. Yr. Ago	2.3

* Preliminary

CHANGE: HOW IT'S AFFECTING HOSPITAL WORKERS

Have you taken a tour through a hospital lately? Did you notice the dozens of departments listed on the building directory, all staffed with highly specialized personnel? Or the computer terminals and the complex-looking machines scattered all around? New technology, new treatments, new expectations about health care are combining to produce dramatic changes.

One of the most fundamental of these changes is the fragmentation of health care occupations brought about by the enormous growth in technical knowledge. In the early 1900s, the only jobs common to all areas of health care were physicians, nurses and aides.* By 1965, the number of primary and alternate job titles had mushroomed to over 300.** According to the most recent information available, this number has more than doubled, to over 700 different job titles.***

Currently, about one-third of the hospital workers in Arizona are professional staff. Registered nurses (RNs) comprise the bulk of this group, about 72 percent. Service and clerical workers follow with, respectively, 23.5 and 18.1 percent of the employment. The next largest group is technical staff, which constitutes nearly 17 percent of hospital employees. Licensed practical nurses (LPNs) prevail in this category, comprising 35 percent of the group's employment. The remaining 8 percent of hospital employees are either managers and officers or maintenance and production workers.

While nurses are by far the most numerous hospital employees, their role in today's modern hospital has changed considerably. According to Janine Cyr, Coordinator of Professional Services for the Arizona Hospital Association, "The trend in nursing is towards specialization." Cyr foresees a declining demand in hospitals for LPNs "because of the trend toward all RNs for primary nursing staff" and she points to the increased responsibilities being assumed by registered nurses. "We are seeing a demand for RNs specializing in critical care and operating room procedures. There is an increasing need for RNs with the additional education and experience required to take on extended roles, such as nurse practitioner, midwife and clinical practitioner." Cyr goes on to add that, "Many times, in rural areas, a nurse practitioner or physician's assistant is solely responsible for patient care and treatment."

But even the role of the general RN is changing. David Gyongyos, Director of Human Resources at Scottsdale Memorial Hospital, states, "There is an increasing need for nursing staffs to be able to keep up with the monitoring devices and the kinds of technological changes that are used with treating patients. We currently employ eight RNs to train staff to work with changing technology and to maintain skills in the hospital." Like Scottsdale Memorial Hospital, most hospitals train their own nurses in the use of new equipment and procedures. When reviewing applications for job openings, however, preference is given to applicants who already have this technical experience.

Another familiar health care profession affected by specialization and the dramatic increase in knowledge is that of pharmacist. According to Ken Underwood, Personnel Director at Humana Hospital, "Clinical pharmacists are in very short supply. Clinical pharmacists are usually Doctorates of Pharmacy who actually work with the medical staff and the nurses in determining the proper medication for patients."

But the fastest growing and most rapidly changing area in a hospital is diagnostic imaging, or what was once known as radiology. As Ken Underwood observes, "There have been more advances in medical technology in this area in the past ten years than there have been in the past 100 years." Diagnostic imaging staffs have grown in both number and degree of specialization. Ultrasound, computerized tomography (CT), digital subtraction angiology (DSA) and nuclear medical resonance (NMR) are just a few of the areas of medical imaging in which technologists and technicians can choose to specialize. And it is changing all the time. Adds Phil Hanson, Personnel Director at Boswell Memorial Hospital, "X-ray was supplemented not long ago by the catscanner, which was a major breakthrough in that it uses minimal radiation. The catscanner is now being preempted by NMR, because it uses radio frequency rays instead of radiation to perform tests."

These advances in diagnostic imaging mean new equipment and new techniques. Staff members must be retrained, and the training has become more difficult and substantially more time-consuming. While there are numerous radiology programs offered by Arizona's universities, community colleges and proprietary schools, the changes are happening so fast that it is difficult for training institutions to keep up with the latest equipment and techniques. It is very hard, therefore, to find individuals who have the desired experience on this new equipment. While some training is provided by the vendors, it is up to the hospital to provide any additional training.

What this adds up to is a shortage of qualified diagnostic imaging technologists and technicians. However, this does not mean the job market is deluged with openings for these positions. Ken Underwood states, "When we get a new piece of equipment, we need a technician to operate it--or we may expand the department and look for qualified applicants to fill the new positions. Otherwise, these types of jobs do not have much turnover. Therefore, the demand is not constant."

Technology is producing many other changes in the hospital. In the surgical suite,

ultrasonic devices and lasers enable the surgeon to perform "hands off" surgery. Programmable wheelchairs and robotic arms and legs are among the aides currently being developed to minimize post-surgical physical adjustments. Medical lab technologists and technicians no longer monitor a chemical reaction, but rather monitor an instrument that carries out the chemistry. "In the labs, there are a lot of microprocessors. This reduces the number of man hours required to perform lab tests and promotes efficiency," states Ken Underwood. Naturally, with all this new equipment, somebody better be around who knows how to repair it when it breaks down. Hence, the need for more biomedical technicians. As the equipment becomes increasingly sophisticated, it becomes more complex to repair. In addition to these biomedical technicians, the rapidly growing usage of microprocessors in all departments is creating a growing demand for electronic technicians who can repair these machines.

It seems that technology has begun to affect nearly every job in the hospital. According to Mike Snyder, Employment Coordinator for St. Joseph's Hospital and Medical Center, "It's getting to the point where about every job in the hospital requires the use of the CRT, so typing skills are important for nearly all applicants." Nor are management personnel immune. Dr. Everett L. Taylor, Vice President for Human Resources at Combined Health Resources, says, "Our Management Information System (MIS), that will be implemented in different phases during the next three years, will mean significant changes throughout our hospital system. While MIS creates more efficiency in the hospitals, it also means management requirements will become even greater because we are creating more distance with technology. Whereas technical skills had previously been the criteria for advancement to the managerial level, the focus will now turn to professionalism and management techniques."

What about the jobs that all this new technology has changed? "Hospitals are retaking the personnel they have and expanding their knowledge to cope with the new technology. Technology is creating new jobs rather than eliminating jobs," states David Gyongyos. For example, an X-ray technician may, with some additional training, become a DSA technician, a catscanner technician, or any number of other specialty diagnostic imaging technicians. Nevertheless, some jobs are becoming less significant to the operation of a hospital. "Nursing assistants are no longer as critical as they once were in hospitals because of the emergence of skilled care and the complexity of today's hospitals," notes Phil Hanson.

The future holds a kaleidoscope of changes to come in hospital technology. Needless to say, the effects on jobs will be even more dramatic than in the past. Mike Snyder believes that, "As medical and technical sciences advance, so do your occupations." Greater computerization will be the future area for much of the technological advancements. In addition, David Gyongyos predicts, "The growth of new methods of surgery through the use of laser and fiber optics will mean significant technological advances in health care." He adds, "As we are able to more minutely address the needs of the human body, the technology that is attendant will become more and more refined."

Aside from technology, new and updated methods of medical treatment, along with an increased public demand, have created the need for a multitude of other health care specialists. "Rehabilitative medicine," according to Ken Underwood, "is a very rapidly growing area in hospitals. This includes speech, occupational, respiratory and physical therapy." Rehabilitative medicine will grow even faster because of the trend from inpatient to outpatient care. The increase in the number of patients using these services will create even more of a demand for these specialists.

Physical therapists, especially, seem to be in very high demand throughout Arizona. Janine Cyr voices the concern of many hospital administrators: "Physical therapists are in desperate need. The only physical therapy program in Arizona is at Northern